Yuba-Sutter Regional Interoperability System – Overview

Yuba City Police Department (with the support of several other public safety and military entities in the Yuba, Sutter, Colusa, and Butte County areas) has begun the first phase of construction on a regional interoperability system that will serve the Yuba City and Sutter County Area. The footprint of this system could potentially also benefit several other agencies within the North Sacramento Valley, from North Sacramento up to Chico. Therefore, per the direction of the OES Law Enforcement Branch, Yuba City Police Department would like to present this plan to CALSIEC for review and approval. *(list of supporting agencies avail on request).*

The current plan (in progress) is to construct multiple standalone mutual aid repeaters on various bands as well as some remote base stations on top of the Sutter Buttes. Common mutual aid frequencies such as CLEMARS-1, CLEMARS-5, CLEMARS-7, CLEMARS-9, VTAC1, UTAC1, ITAC1, and possibly WHITE-1 are among the several frequencies discussed to be the first constructed, with additional frequencies to follow as discussed or additional participation is desired from other agencies. The repeated frequency pairs would be constructed as standalone temporary repeaters, with wire line control directly at Yuba City Police Department with repeat enable/disable capabilities. The Simplex frequencies would be wire lined to Yuba City Police Department as temporary remote base stations. It is critical to understand (because of some of the frequencies and RF footprint) that this infrastructure would only be **temporary** in nature, and would **not** be utilized for regular dispatch operations. YCPD currently has regular CLEMARS-1 and CLEMARS-4 stations operating within the 100' rule as specified in the CLEMARS plan. These high-level frequencies would only be "lit up" in the event of an emergency incident requiring their use, or for coordinated tests or exercises. Any time any high-impact frequencies would be involved (such as CLEMARS 1 or WHITE 1) the proper notifications and authorizations would be obtained, and/or teletypes sent per the CLEMARS/SMARS plans.

In addition to the standalone repeaters and base stations on these mutual aid and interop frequencies, we will be installing a Raytheon ACU2000 IP Gateway Patch on site with the equipment. It will be co-located on site with the equipment so we can properly utilize **real-time** RX audio, TX audio, and COR to provide the least amount of latency or delays physically possible (technical explanation available on request). This system will operate standalone from any IP or computer connectivity and function as an independent interoperability system, as well as it can be utilized for IP, RoIP, and SIP connectivity and functionality if we so desire for additional network capabilities and future growth. The idea is that at anytime any of the above mentioned frequencies needs to be connected to another, a temporary patch can be created to facilitate the need for cross-band communications, and then the patch can be disconnected. An example of this is if we have 800Mhz users responding into the Yuba-Sutter area for a mutual aid situation, or if we have Sutter County units responding to Sac Co for an airplane crash. We would be able to direct the appropriate Sutter Co Command units (UHF) to come up on UTAC1, and the appropriate Sac Co Command Units (800) to come up on ITAC1 and facilitate a link between the two, forming a temporary linked command net until the incident is terminated. Many more examples are available on request (from actual experience and needs).

The benefit of this system is the availability for use by other agencies within the RF footprint, as well as the ability for use by roamers (such as other State, Local, or Fed Public Safety). **Anyone following the CLEMARS and SMARS communications plans and recommended CALSIEC interop frequency plans should be able to utilize and communicate with this regional interoperability system.** This is one main reason we want to present this project to CALSIEC for approval and support. The plans as stated above are simply our desires for "phase 1" of this project. Additional PSIC funding has been requested to expand and enhance the IP and Network functionality of this project, as well as add other frequencies and capabilities as we anticipate they will surface (during this CALSIEC approval process). We are open to input, suggestions, requests, and involvement from other agencies as we develop this system.

General Questions about this project can be directed to Chief Doscher, Yuba City Police Department (530) 822-4660. Technical questions can be directed to Reserve Officer Bill Corey (530) 682-8899.